EFFECT OF AEROBIC EXERCISES ON SELF ESTEEM AMONG SCHOOL CHILDREN AT SELECTED SCHOOLS, COIMBATORE

REG. No. 301215053

A Dissertation Submitted to

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LEVEL OF SELF ESTEEM

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ABSTRACT

An interventional study was conducted to assess the effect of Aerobic Exercises on Self Esteem among school children of selected schools at Coimbatore. Quasi- experimental one group pre-test and post-design was used to conduct the study. The data were collected for a period of 30 days. From the first day of data collection period, Modified Rosenberg Self Esteem Scale was administered to 399 school children of both the schools. Out of them purposive samples of 124 school children between the age group of 12 to 14 years of age who are with low Self Esteem was included in the study. Aerobic Exercises had three sessions such as warm-up session for 5 minutes, activity session for 20 minutes and cool down exercise for 5 minutes; totally 30 minutes intervention for 3 alternatives days in a week, for four weeks. Level of Self Esteem was assessed using Modified Rosenberg Self Esteem Scale. The obtained data were analyzed using t test. The result showed that there is a significant difference in Self Esteem of school children before and after implementation of Aerobic Exercises. Hence it is concluded that Aerobic Exercises can be implemented to improve Self Esteem among school children aged between 12 to 14 years.

Effect of Aerobic Exercises on Self Esteem among School Children at Selected Schools, Coimbatore

A child is a unique individual; he or she is a miniature adult, a little man or woman. The childhood period is a vital period because of socialization process by the transmission of attitude, customs, belief, behavior through the influence of the family and community. Family's cultural and religious belief, educational level and ways of living influence the promotion and maintenance of child health.

Children are the major consumers of health care. Children always need special care to survive and thrive. Good health of these precious members of the society should be ensured as prime importance in all countries. What is done to the children, they will do to the society, and thus children are the wealth of tomorrow [Karl Menninger, 1990]

Self Esteem is the value that an individual places on oneself and refers to an overall evaluation of oneself [Willoughby, King, and Polatajko, 1996]. The term Self Esteem refers to personal, subjective judgment of one's worthiness derived from and influenced by the social groups in the immediate environment and individual perception of how they are valued by others. Self Esteem changes with development. Highly egocentric toddlers are unaware of difference between competence and social approval. On the other hand, Preschool and early school age children are increasingly aware of discrepancy between their competencies and abilities of more advanced children. Within the family, school children continue to learn those values and competencies and they will bring into the adult world. Their continued achievement depends on a variety of family factors, including parental expectation, stimulation, and guidance.

It is normal to raise and fall in cycles, from day to day and even hour to hour, as a child builds and then rebuilds his or her self concept. Children who feel as though they are not good in at least one thing tend to be emotionally vulnerable. To help strengthen and support healthy self esteem in child, it is necessary to rule out the self esteem by Aerobic Exercises, which improves the social skill, helps in burn out the unwanted hormones and releasing the new hormones needed for new memories and thus improving the thinking capacity.

Aerobic Exercises refers to the exercise that requires the consumption of substantially more oxygen than at rest. Aerobic literally means living in air and it refers to the use of oxygen to adequately meet the energy demands during exercise via aerobic metabolism. Aerobic exercises provide cardiovascular conditioning which decreases the risk of heart disease, improves psychological functioning of the individual.

Aerobic Exercises strengthen the entire cardiac functioning, including the heart and lungs. As the heart and lungs are strengthened, this helps to prevent heart diseases. Children are less likely to become overweight and will have better control of their body fat. Overweight children are able to reduce their body weight and body fat due to the physiological effect of burning fat while exercising.

Moderate, fun oriented exercises literally burns off excess harmful hormones and at the same time, increases the release of beneficial ones. One of the beneficial hormones acts as a neurotransmitter for establishing new memories. Active children have the ability to concentrate much better, even at the end of long school day. Studies report that the exercises decreases anxiety, reduces depression, and improves

mood and outlook, Self Esteem in children. In addition, their quality of sleep is also improved.

1.1. NEED FOR THE STUDY

High level wellness for the individual child or adult is defined as an integrated method of functioning which is oriented toward maximizing the potential of the individual, within the environment where he is functioning [Dunn, 1977]. Therefore, in order to achieve high level wellness, the individual continuously progresses as a whole being, physically, emotionally, mentally, and spiritually, toward a higher level of functioning in order to achieve a fuller potential.

The present total population of children in the world is 7 billion. In India, 31 percent of the population, i.e., male 190,075,426 and female 172,799,553 are children [census 2012]. For the children, Self Esteem comes for knowing that they are loved and that they belong to a family and society that values them. It also comes from being praised and encouraged for the things that are important to them.

Self Esteem, which is a child's sense of worth and belonging, is very fragile between the ages of 6 to 12 years. Every day, the children in this age group, may face various challenges at home with their families and at school with their friends and teachers. At the end of one day, they may feel good about themselves. They have fun with their friends, have done well at school, and are happy at home. The next day, it may fall apart if even one thing goes wrong.

For most of the children, the emotional discomfort of low self esteem is only temporary. But in some, low self esteem can develop into other problems [Usher,

Zahn-Waxler, Finch & Gunlicks, 2000]. Low self esteem has been implicated in depression, suicide, anorexia nervosa, delinquency, and other adjustment problems [Fenzel, 1994]. The seriousness of the problem depends not only on the nature of the low self esteem, but also on other conditions as well. When low self esteem is compounded by difficult school transition, a troubled family life, an adolescent's problem can intensify.

A study conducted by Herman-Toffler (1998) examined the effect of an Aerobic conditioning program on perceived athletic competence, physical appearance, social acceptance, perceived global self-worth, self-perceived behavioral conduct, figural creativity and aerobic power. 52 boys and girls from the third grade were randomly assigned to an intervention and control group. The intervention group performed 25 minutes of Aerobic exercises with energetic music per day for 8 weeks, using large muscle groups at 60% to 85% of VO2 max (VO2 max is the maximum ability of the body to transport oxygen from the air to the muscles for energy generation and is measured in milliliters of oxygen per kilogram of body weight per minute of exercise). The control group met three times a week for traditional physical education. Self-esteem was measured using the Self-Perception Profile for Children (Harter 1985b).The findings revealed that the Aerobic Exercises program has improved the Self Esteem of the children belonging to third graders.

Mc Mahon (1988) evaluated the effect of a structured Aerobic Exercises program on physical fitness, self-concept and mood in juvenile delinquents. 98 males from two juvenile detention facilities, aged 14 to 18 years, took part in the study. They were randomly assigned to either long-distance running or vigorous basket-ball with HR above 160, or to activities like base-ball, volley-ball, etc., with HR less than

160. The activity program lasted for 40 minutes, three times a week, for 3 months. Self-esteem was measured using the Piers-Harris Children's Self-Concept Scale. The conclusion of the study was that the Aerobic Exercises has experienced with increase in duration of involving in physical activity and improved the positive self concept among juvenile delinquents.

As per the mentioned literature above, the research scholar selected Aerobic Exercises as one of the intervention for school children who are identified with low self esteem.

1.2. STATEMENT OF THE PROBLEM

EFFECT OF AEROBIC EXERCISES ON SELF ESTEEM AMONG SCHOOL CHILDREN AT SELECTED SCHOOLS, COIMBATORE

1.3. OBJECTIVES

1.3.1. Assess the level of Self Esteem among school children in selected schools.

1.3.2. Administer Aerobic Exercises to the school children with low Self Esteem in selected schools.

1.3.3. Evaluate the effect of Aerobic Exercises on improving Self Esteem.

1.3.4. Compare the effect of Aerobic Exercises in Government school and private school.

1.3.5. Associate the level of Self Esteem with selected demographic variable.

1.4. OPERATIONAL DEFINITION

1.4.1. EFFECT

Effect refers to the change of Self Esteem among school children with low Self Esteem after implementation of Aerobic Exercises.

1.4.2. AEROBIC EXERCISES

Aerobic Exercises refers to the physical activity or exercises with music of three sessions such as warm up, physical activity, cool down intervention, for 3 days in a week.

1.4.3. SELF ESTEEM

Self Esteem is the sense of worth and belongings, experienced by the school going children in the age group between 12 to 14 years.

1.4.4. CHILDREN

Children refer to those who are between the age group of 12 to 14 years with low Self Esteem studying in selected schools at Coimbatore.

1.5. CONCEPTUAL FRAMEWORK

The conceptual frame work used for the study was based on general system theory. The basic concepts of general system theory were proposed in the 1950's. One of its major proponents, Ludwig Von Bertalanffy (1968) introduced System Theory as a universal theory that could be applied to many fields of study. Nurses are increasingly using System Theory to understand not only biological system but also

systems in families, communities, nursing and health care. General System Theory provides a way of examining interrelationships and deriving principles.

A system is a set of interacting identifiable parts or components and it depends on the quality and quantity of its input, throughput, output and feedback. Input consists of information, material or energy that enters the system. After the input is absorbed by the system, it is processed in a way useful to the system. This information is called throughput. Output from a system is energy, matter or information given out by the system as a result of its processes. Feedback is the mechanism by which some of the output of a system is returned to the system as input. Feedback enables a system to regulate itself by redirecting the output of a system back into the system as input, thus forming a feedback loop.

1.5.1. Input

In the present study, input begins with establishing a therapeutic relationship with school children. In this phase, the researcher identifies children with different level of Self Esteem and collects the necessary information regarding demographic data such as age, sex, class, extracurricular activities, subject of interest, education of parents and occupation of parents, birth order, siblings, and number of hours allotted for sports in a week, type of family and academic performance. The Self Esteem scores of the school children were assessed using Modified Rosenberg Self Esteem Scale.

1.5.2. Throughput

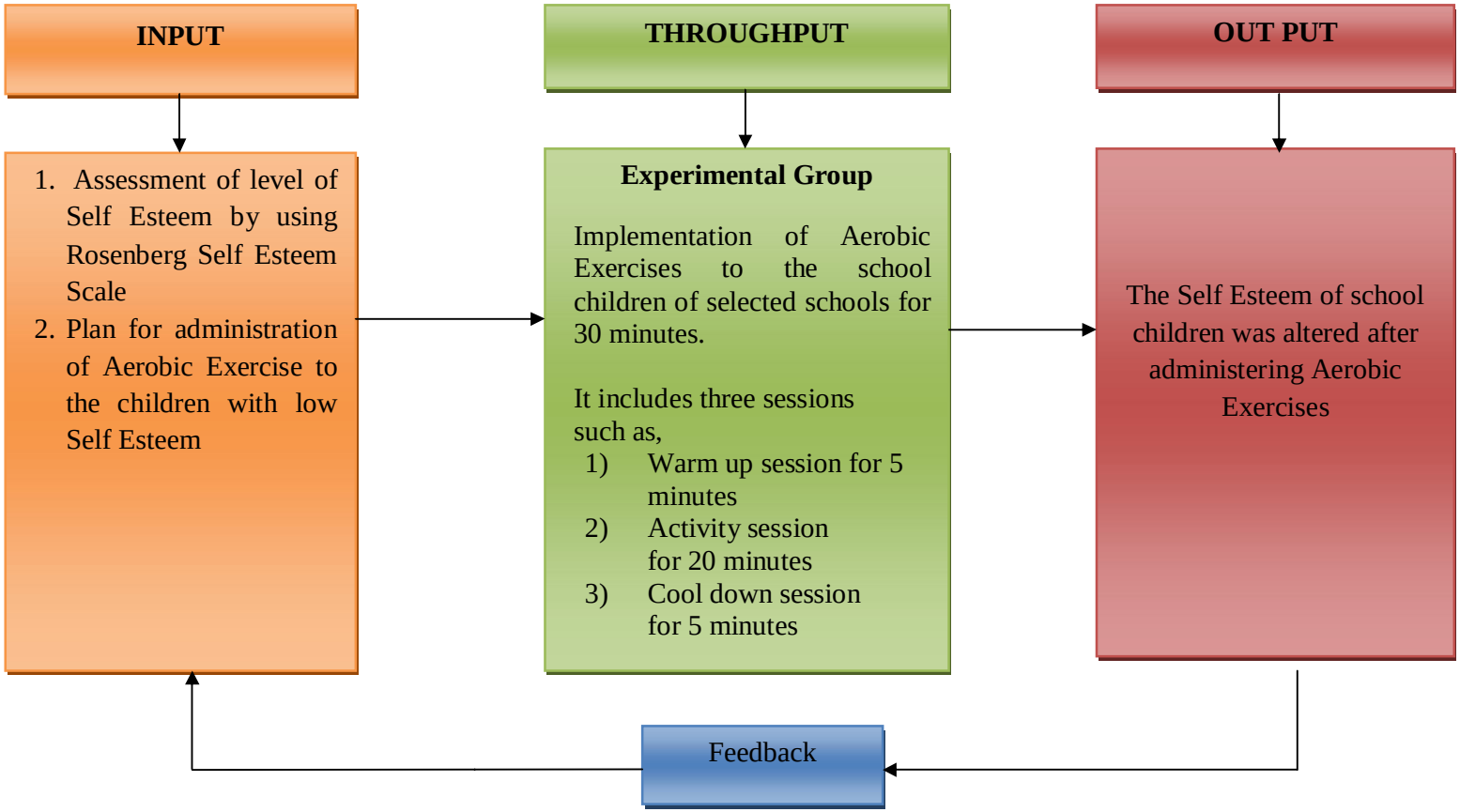
This phase includes implementing the Aerobic Exercises to the school children for 30 minutes with three procedures, viz., warm up for 5 minutes, and activity for 20 minutes and cool down for 5 minutes. The intervention was administered for 4 weeks in 3 alternative days in a week with 30 minutes of duration.

1.5.3. Output

The output phase consists of evaluating the effect of Aerobic Exercises to the school children with low Self Esteem by using Modified Rosenberg Self Esteem Scale. There will be a significant difference in the level of Self Esteem among school children with low Self Esteem after Aerobic Exercises.

Fig. 1.1.

CONCEPTUAL FRAMEWORK BASED ON GENERAL SYSTEM THEORY BY LUDWIG VON BERTALANFFY (1968)



Source: Kozier & Erb's (2008)

1.6. PROJECTED OUTCOME

The Aerobic Exercises will improve Self Esteem among school children at selected schools of Coimbatore.

REVIEW OF LITERATURE

Literature review is a text written by someone to consider the critical points of current knowledge including substantive findings as well as the theoretical and methodological contribution to a particular topic. Its main goals are to situate the current study within the body of literature and to provide context for the particular reader. In this chapter the literature review is organized and presented under two headings.

2.1. Literature related to Self Esteem among school children.

2.2. Literature related to Aerobic Exercises among school children.

2.3. Literature related to Aerobic Exercises on self esteem.

2.1. LITERATURE RELATED TO SELF ESTEEM AMONG SCHOOL CHILDREN

Brown (1998), a psychologist conducted a study, longitudinal study for 5 years to evaluate the changes in Self Esteem and feelings of competence with physical appearance and social acceptance. The samples were 1166 white children and 1213 black children, aged 9 and 10 years. They performed the assessment of maturation stage and body mass index, by using Harter's Self perception Profile for children biennially. The results stated that black girls had higher and more stable self worth and greater satisfaction with their physical appearance compared to white children.

Sieving R E, et al.,(1999), conducted a study on development and enhancement of Self Esteem in children and they recognized the Self Esteem as important factors in child's development. The parents can play major role for the

development of Self Esteem of the child and also for enhancing a child's Self Esteem. Pediatric nursing practitioners are in an excellent position to help the parents to understand their child's Self Esteem development and to assist the parents in providing an environment conducive to the development. Important areas for pediatric nursing practitioners include exploring the expectation of their children, teaching them effective communication techniques, discipline strategies, offering them child centered guidance, and methods to promote the children's autonomy.

Scott, et al., (2002), conducted a study on validity of life satisfaction and Self Esteem with a total sample of 290 middle school students. The tool of the study was Self Description Questionnaire and the student's Life Satisfaction Scale. Children's perception of their academic performance was more strongly related to their global Self Esteem than their global life satisfaction, whereas children's perception of the quality of their family relationship had the strongest correlation with their global life satisfaction. The findings were then replicated with a sample of 183 elementary school students, taken together. The findings provided strong support for the meaningfulness of the global life satisfaction of the children as well as the multidimensionality of the children.

French S A, et al., (2004), conducted a study to examine the relationship between obesity and Self Esteem, through cross sectional and prospectively, over three years in a cohort of 1278 adolescents in grades 7 to 9 at baseline. Cross sectionally analysis revealed an inverse association between physical appearance Self Esteem and body mass index in both males and females. In females, body mass index was inversely associated with global Self Esteem, close friendship, and behavioral

conduct Self Esteem. Prospective analysis revealed inverse association in females' physical appearance and social acceptance Self Esteem.

Jennifer A, (2004), conducted a study on evidence for a Self Esteem approach in the development of body image and prevention of eating problems among children and adolescents. They explained that, the Self Esteem is one of the important risks and protective factors in the development of body image concerns and eating disorders and recommend subsequent use of a Self Esteem approach for prevention of eating disorders. Interventions containing strong Self Esteem components from around the world are discussed in relation to their impact on the body image and eating behavior.

Hunshal, et al., (2005), conducted a descriptive study to identify the social, emotional and educational adjustment of institutionalized children. The sample for the study comprised 148 children in the age group 0f 10 to 16 years, residing at four institutions and the results clearly indicated that institutionalized children have more social, emotional, and educational problems which made them socially more aggressive, emotionally unstable and educationally not interested in studies and these characteristics were responsible for unsatisfactory adjustment of institutionalized children.

Biro et al., (2006), conducted a longitudinal study to examine the changes in Self Esteem in relation to race and body mass. The samples were girls recruited at ages 9 and 10 years and were followed to age 22 years. The Harter self-perception profile was administered to everyone, analyzing scores from the Global Self worth Scale at ages 9 to 12 years, 13 to 16 years and 17 to 22 years. The results showed that,

the self worth was greater in black than white women and greater with lower body mass index, which are important predictors of Self Esteem.

Trzesniewski, et al., (2006), who conducted a prospective study on low Self Esteem during adolescence, predict poor health, criminal behavior, and limited economic prospects during adulthood. Using the prospective data from the multidisciplinary health and development study birth cohort, the researcher found that adolescence with low Self Esteem had poor mental and physical health, worse economic prospectus, and higher levels of criminal behavior during adulthood, compared with adolescents with high Self Esteem. The findings from the informant's reports, suggest that the low Self Esteem during adolescence predicts negative real world consequences during adulthood.

Okada A, et al., (2007), conducted a study on Self Esteem in children with psychosomatic symptoms. Self Esteem is the evaluative feelings one holds for oneself and the sense that one has essential worth. It is evaluated as the difference between the actual self and the ideal self. Healthy Self Esteem supports psychological stability and positive social activity and is an essential element in the psychological development of children. The purpose of the study was to evaluate Self Esteem in children with psychosomatic symptoms and elucidate a strategy for using such evaluation in therapy. They evaluated Self Esteem in 56 patients at the department of pediatrics of Okayama university hospital who have undergone outpatient therapy for psychosomatic symptoms, using pope's 5 Scale Test of Self Esteem for children. Examining the attributes, course of therapy and social adjustment, patients with low Self Esteem on multiple scales at the first visit, were all female, and these patients had a significantly higher frequency of family function problems, such as a family

member with a psychiatric disorder, economic hardship, or experienced child abuse. Moreover, the prognosis for these patients was poor regardless of their social adjustment at the first visit.

Block, et al., (2008), in a longitudinal study examined the developmental changes in Self Esteem from early adolescence through late adolescence to early adulthood. The samples included were 47 girls and 44 boys. The findings showed that the Self Esteem of males increased and females decreased over time. Boys and girls with high Self Esteem possessed quite different personality characteristics in early adolescence. Although important differences remained, the personality characteristics associated with high Self Esteem were similar for the two sexes in early adulthood.

Griffiths L J, et al., (2010), conducted a systemic review on Self Esteem and quality of life in obese children and adolescents. Although an increasing number of children and adolescents are becoming obese, the psychological morbidities associated with obesity are not well established. Child completed and parent proxy assessments were consistent in showing significant reduction in global Self Esteem and quality of life in obese youth. Competences particularly affected were physical competence, appearance and social functioning. There were no clear differences in effect between children and adolescents, and evidence on gender and ethnicity was lacking. Competency improvements occurred in the presence and absence of weight loss, suggesting their value as intervention outcomes and the need for further investigation.

Ghobani Amir, et al., (2011), has done a descriptive and correlation study to investigate the relationship between child rearing styles and students Self Esteem

among both male and female students. The sample group consisted of randomly selected 100 students including 50 girls and 50 boys. The tool used was Self Esteem Eisenach Questionnaire and a question was added to determine the Child Rearing Scale. The results showed that the Self Esteem of the students with the confidence overwhelming child rearing patterns is more than the Self Esteem of students with authoritarian and negligence patterns of child rearing. The researchers conclude that the role of parents in providing mental health, academic achievement and Self Esteem is far beyond anything that has been fulfilled.

Hosogi M, et al., (2012), conducted the study on importance and usefulness of evaluating Self Esteem in children. For children, a particular environment helps to adapt in a better society. Various psychologists have provided definitions of Self Esteem, and examined methods of objectively evaluating Self Esteem. Questionnaire Style assessment methods for adult, include Rosenberg Self Esteem Scale and Janis field feeling of inadequacy Scale, the methods for children, include Coppersmith Self Esteem Inventory and Pope's 5 Scale Test of Self Esteem, Rosenberg Self Esteem Scale. The development of children's Self Esteem, is heavily influenced by their environment, that is, their homes, neighborhoods, and schools. Children with damaged Self Esteem are at risk of developing psychological and social problems, which hinder recovery from low Self Esteem. Thus to recover low Self Esteem, it is important for children to accumulate a series of successful experiences to create a positive concept of self. The researchers found that evaluating children's Self Esteem can be an effective method for understanding their past and present circumstances, and useful to treat children with psychological symptoms.

Murtha, et al., (2012), conducted a descriptive study to assess the parental attachment and Self Esteem adolescents. Convenient sampling was used to select a sample of 100 adolescents between the age group of 15 to 18 years. Socio Demographic Data Schedule, Parental Attachment Questionnaire and Self Esteem Inventory were used for the data collection. The findings revealed that, there is a statistically significant positive correlation between overall parental attachment and Self Esteem among the adolescents.

2.2. LITERATURES RELATED TO AEROBIC EXERCISES AMONG SCHOOL CHILDREN

Obert et al., (2001), had conducted a study on the effect of a 13 week Aerobic training programme on the maximal power developed during a force velocity test in prepubertal boys and girls. Boys and girls aged 10 to 11 yrs participated in physical activities, served as a subjects. One group participated in an extra one hour Aerobic training session twice a week, while others served as controls. A force velocity test was performed on a friction loaded cycle ergo meter. Experimental training consisted on one set of interval runs and a continuous run. It was concluded that aerobic training in prepubertal children actually altered the anaerobic performance factors of force and power production.

Lewis (2005), had conducted a study to determine the effects of a home exercise program of combined aerobic and strength training on fitness with a 10.5 year old girl with Down syndrome. Measurement included cardiovascular variables, strength, body composition, flexibility, and skill. The subject participated in a home exercise program: 30 to 60 minute of moderate to high intensity exercise five to six

days per week for six weeks. The cardiovascular variables monitored were heart rate and oxygen consumption during a sub maximal treadmill stress test. Other measures included 10 repetition maximal strength of skeletal muscle groups, body mass index, flexibility and gross motor scales of the bruin inks- oseretsky test for motor proficiency, and anaerobic muscle power. Improvement in sub maximal heart and respiration rates, aerobic performances, muscle strength and endurance, gross motor skills and anaerobic power were observed for this subject. Body weight and flexibility were unchanged.

Burgess, et al., (2006), investigated the effects of 6 weeks Aerobic dance on variables with 50 British school girls aged 13 to 14 years. A cross-over design was used with two equivalent groups taught normal physical education and Aerobic dance in a different order. The body attitude questionnaire (BAQ) and children and youth physical self perception profile were administered as pre, mid, post test to each participant in each group before the first intervention, at the change-over and after 12 weeks. The results of this study revealed that the participants in 6 weeks of Aerobic dance significantly reduced body image dissatisfaction (attractiveness, feeling fat, salience and strength and fitness) and enhanced physical self perceptions (body attractiveness and physical self worth), although these improvements were not sustained .

Walters, et al., (2006), conducted a study to examine the link between Aerobic Exercise and Self Esteem and problem behaviors' in children. A group of 67 children of grades 3 to 4 received an intensive Aerobic exercises like walking, jogging, skipping, jumping rope, as intervention and a group of 80 grade matched children received a minimally Aerobic exercise program. The duration of the intervention

period was minimum 4 weeks. The Self Perception Profile for children was administered to both groups pre-test and post-intervention. Parents similarly completed the behavioral rating index for children to assess the level of problem behavior pre and post-intervention .The results of the study shows that the Aerobic exercise is linked to increases in self concept.

Coe et al., (2006), conducted a study on physical activity lead the children to prove academic performance. The researcher randomly assigned 214 students of sixth grade to physical education classes or to arts or computer classes for school semester. Participation in physical classes did not differently affect children's performance on the Tera nova standardized test of academic achievement. The results found to be exercises to have robust positive effects on children's academic achievement as measured by standardized test instrument.

Viscid, et al., (2007), analyzed the impact of special programmed physical education including dance, aerobics and rhythmic gymnastics on the development of motor and functional abilities and morphological characteristics of female fourth grade high school children in Zagreb. A total sample of 220 high school children aged 16 to 18 years were divided into two groups: experimental group of 115 students attending the program composed of dance structures and aerobics, and control group of 105 students attending classic program of physical education. A set of 3 morphological variables, 6 motor variables and one functional variable were applied in both groups on three occasions during an academic year (initial, transient and final measurement). Two-factor analysis of variance, showed the experimental program to significantly influence the development of co-ordination and specific rhythm co-ordination, functional aerobic ability, repetitive and explosive strength and flexibility,

along with significant reduction of overweight and adipose tissue. The study results clearly indicated that the existing programs of physical education should be revised and replaced by more appropriate ones.

Davis, et al., (2007), conducted a study on exercises on cognitive functioning of 94 overweight children ranged 7 to 11 years. The children were randomly assigned to one of three experimental conditions: no exercise control, 20 minutes exercise, or 40 minutes exercise condition. Children participated in physical training games 5 days / week after school. The program consisted of games (e.g. running games, jumping rope, soccer) designed to maintain average heart rates of above beats per minute and to exert a vigorous physical challenge on children. A standardized test of cognitive function, the cognitive assessment system, was administered to each child before and after intervention period. The CAS provides 4 scales of cognitive functioning, attention, simultaneous and successive functioning. Analysis of covariance performed on post-test scores revealed that exercise influenced the planning scale. Children in the high-dose exercise group improved their planning scale scores significantly more than the children in the control group. No effects of the exercise intervention were observed on remaining CAS scales. There were no differences in the CAS performance of children who performed 20 minutes of daily exercise and those children in the control condition, suggesting that positive effects of covariance may occur only with a large amount of vigorous physical activity.

Tuchman, et al.,(2008), conducted a study on the effect of Aerobic exercises on executive functions in children of 4^{th} 5^{th} and 6^{th} grade. The researchers randomly assigned to a minimum of 4 weeks aerobic training for 30 minutes per session, 3 times a week. The children performed better than the children in a regular exercises class on

a test of executive function by using cognitive flexibility measured by the alternate uses test. The result shows that the executive function is sensitive to the effects of Aerobic exercises training program in children.

Kamiji (2008), conducted a study on Aerobic Exercises on cognitive function among children. The researcher randomly assigned 171 sedentary, overweight or obese children of age 7 to 11 years. They are allotted to either low dose Aerobic exercises (20 min. per day), high dose Aerobic Exercises (40 min. per day), or control group offered no exercise program. Aerobic exercises included running games, jumping rope, and modified basket ball and soccer. The cognitive functioning was assessed by the Cognitive Assessment System, a standardized psychological assessment that measures four interrelated cognitive processes: planning, attention, simultaneous processing and successive processing. In that, only the planning scale measures executive function. The results showed that the response benefit of exercises, specific to executive function, is measured by the cognitive assessment system planning score.

Air ton J, et al., (2012), conducted a study to evaluate the prospective association between leisure time physical activity practice at 11 years of age and incidence of school failure from 11 to 15 years of age . The sample comprised of more than 4300 adolescents followed up from birth to 15 years of age participating in birth cohort study in Pelotas, Brazil. The incidence of school failure from age 11 to 15 years was calculated by first excluding from the analysis, all subjects who experienced a school failure before 11 years of age and then categorizing as positive all those who reported repeating a grade at school from 11 to 15 years of age. Leisure time physical activity was measured using a validated questionnaire. Results show

that adolescence allocating more than 1000 min / week, more likely to experience a school failure from 11 to 15 years of age. Although this finding does not advocate against physical activity promotion, it indicates that excess time allocated to physical activity may jeopardize school performance.

Crosby A. (2012), conducted a study to evaluate the effect of physical training in children with asthma on pulmonary function, aerobic capacity and health related quality of life. The study participants were asthmatic children aged 6 to 18 years, participating in any mode of physical exercise. A total of 516 subjects met inclusion criteria for review, severity of asthma ranged from mild to severe. Mild improvement in pulmonary function was observed. Physical training led to an increase in aerobic capacity. The results showed that the physical training mildly improves pulmonary function in children with asthma, but does increase aerobic activity.

2.3. LITERATURE RELATED TO AEROBIC EXERCISES ON SELF ESTEEM

Salukan (1994), examined the relationship between improvement in sport skills and increase in positive self esteem. Among total youths 288, aged 12 to 18 years, were randomly assigned to intervention (field hockey (96) or athletics (32 sprints, 32 discuses, 32 long jumps) or a control group that did not participate in any sports skill training. The intervention lasted 10 weeks, 45 minutes three times each week. Compliance was 100 % .self esteem was measured using Tennessee self concept scale and the results were explained that, there was a moderate relationship between the students with sports skill and self esteem.

Smith (1982), assessed the effects of two types short term physical education on self concept and movement skills. The healthy pupils about 66 were matched for academic achievement, classroom teacher, socio economic background, sex and race. They were randomly assigned to one of three groups: one with games and relays with emphasis on avoiding waiting for turn and inactivity, one group with problem solving for developing motor skills and third free play. They activities were performed for 30 minutes twice a week for 5 weeks. Self esteem was measured using the Martinek-Zaichkowsky Self Concept Scale (Martinek 1998). The result clearly indicated that people underwent short term activities has moderate improvement in self concept, people with free play doesn't have any improvement in self concept and the people trained with motor skills for problem solving has mild improvement in self concept.

Eke land E, et al., (2009), conducted a study on Exercises to improve self esteem in children and young people. In the randomized controlled trails where the study population consisted of children and young people aged from 3 to 20 years, in which one intervention was gross motor activity for more than 4 weeks and the outcome measure was self esteem. Twenty three trails with a total of 1821 children and young people were included. Thirteen trails compared exercise alone with no intervention .eight were included in the Meta analysis, and overall results were heterogeneous. Twelve trails compared exercise as a part of comprehensive programme with no intervention. The results indicate a moderate short term difference in self esteem in favor of the intervention.

METHODOLOGY

The present study is designed to evaluate the effects of Aerobic Exercises on Self Esteem among school children with low Self Esteem. This chapter represents the overall plan of research process and deals with description of the research approach, design, settings, population, criteria for sample selection, sample and sampling technique, development of tool and description of tool, procedure for data collection and plan for analysis.

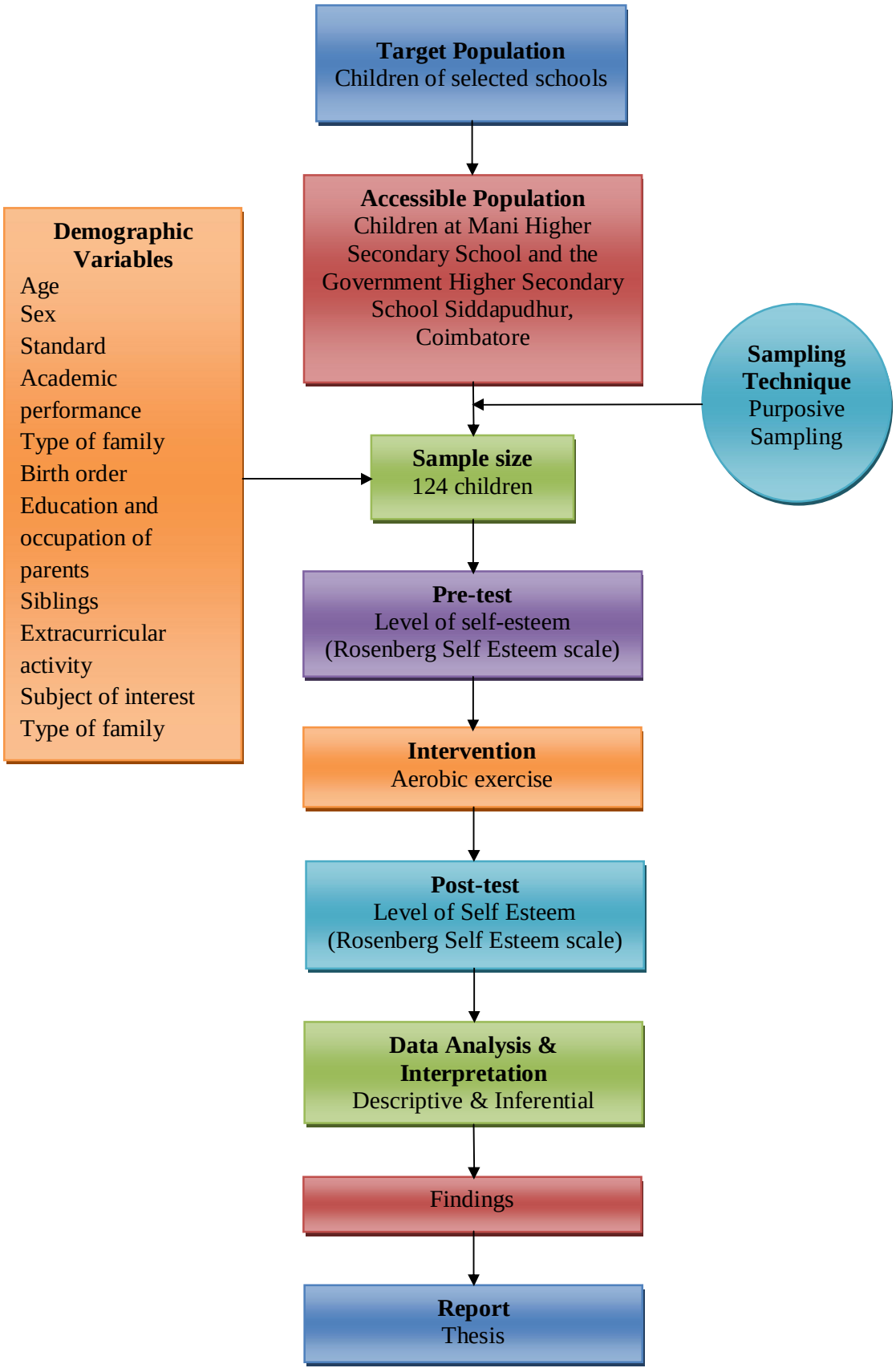
3.1. RESEARCH APPROACH

The present study is aimed at determining the effectiveness of Aerobic Exercises on Self Esteem among school children who are all reported with low Self Esteem and the Self Esteem was assessed by using Modified Rosenberg Self Esteem Scale. Hence, a quantitative experimental research approach was considered to be appropriate for the study.

3.2. RESEARCH DESIGN

Quasi experimental one group pre-test and post-test design was adopted to evaluate the effectiveness of Aerobic Exercises on Self Esteem among school children.

FIG 3.1 SCHEMATIC REPRESENTATION OF RESEARCH DESIGN



3.3. SETTINGS

The study was conducted in Mani Higher Secondary School and Government Higher Secondary School at Coimbatore. The medium of instruction is English in both the schools and the schools are equipped with all basic facilities. A population of 2167 children is studying in these schools.

3.4. POPULATION

The target population for this study is children of selected schools. The accessible population included was children with low Self Esteem of Mani Higher Secondary School at Coimbatore and Government Higher Secondary School, Siddapudhur, Coimbatore.

3.5. CRITERIA FOR SAMPLE SELECTION

The samples were selected based on the following inclusion criteria.

3.5.1. Inclusion criteria

1. Children with low Self Esteem
2. Children of age 12 to 14 years
3. Children willing to participate in the study

3.5.2. Exclusion criteria

1. Children who are physically challenged
2. Children who are having respiratory problems
3. Children with fractures

3.6. SAMPLING

Total population of school children at the age group of 12 to 14 years is 2167. The population comprises of both male and female children. Among these school children 399 school children were selected for this study. The school children with fractures and respiratory problems were excluded in this study under exclusion criteria. The Modified Rosenberg Self Esteem Scale was administered to 399 school children and 33 children from Government School and 91 children from Mani School at Coimbatore were selected as samples. The samples were selected on the basis of Purposive Sampling Technique.

3.7. VARIABLES OF THE STUDY

The independent variable of the study was Aerobic Exercises and the dependent variable was Self Esteem.

3.8. MATERIALS

The tool consists of three sections.

Section 1: Demographic profile

Section 2: Modified Rosenberg Self Esteem Scale (Rosenberg, 1965)

Section 3: Aerobic Exercises

3.8.1. Demographic profile*:* This includes age, sex, standard of education, academic performance, subject of interest, number of hours allotted for sports in a week,

extracurricular activities, and types of family, birth order, siblings, and education of father, education of mother, occupation of father and occupation of mother.

3.8.2. Rosenberg Self Esteem Scale (Rosenberg, 1965): The Rosenberg Self Esteem Scale was developed by the sociologist, Dr. Morris Rosenberg. It is the Scale to evaluate the global Self Esteem and it consists of 10 items and it is answered on four point scale – from strongly disagree to strongly agree. The Scale has been modified and it is administered to the children.

Scoring: The questionnaire consist of four sub-groups, each consists of five questions. The scores are calculated as strongly disagree-0, disagree-1, agree-2, strongly agree-3. The total score is calculated by adding score of each answer. The score ranges from 0 - 60.

Interpretation

Total score: 60

Score of 0-30:	Low Self Esteem
Score of 31-45:	Moderate Self Esteem
Score of 46-60:	High Self Esteem

Validity and reliability: Test retest reliability over a period of 2 weeks revealed correlation of 0.85 and 0.88, indicating excellent stability. The tool demonstrates concurrent, predictive and construct validity using known groups.

3.8.3. Aerobic Exercises for children: The Aerobic Exercises was selected as an intervention to manage the children with low Self Esteem. Various researches prove that, the Aerobic Exercises has effectiveness of improving Self Esteem in school children. The Aerobic exercises program is scheduled in 3 days in a week for 30 minutes per day for 4 weeks.

PROCEDURE

Aerobic Exercises are a physical exercise of relatively low intensity that depends primarily on the aerobic generating process. Aerobic literally means living in air and refers to the use of oxygen, to adequately meet energy demands during exercises via aerobic metabolism. It was developed by Dr Kenneth C. Cooper in the year of 1966. Making exercise fun is the great way to encourage the school children to get active and energetic. In the present study the researcher instructed the school children to follow the steps of Exercises.

STEPS

PREPARATION

- Prepare the children for Aerobic Exercises.
- Provide safe and motivating environment for Aerobic Exercises.
- Ensure that all the activities and facilities which enable every student to participate.

“Exercises with Music”

WARM UP EXERCISES FOR 5 MINUTES

Neck Exercises

1. Take a deep breath.
2. First stand with leg with distance apart and your hands on your wrist.
3. Now roll your neck slowly from left to right and then right to left, then repeat it for 2 times.
4. Next, move your neck slowly from left and then right and look up and down and repeat it for 2 times.

Shoulder Exercises

1. Stand straight, move your right hand towards back, lock your elbow tightly and start roll your hand backwards and do the same with your left hand.
2. And move your right hand forward and then do the same in the left hand slowly.
3. Next, move both the hands backward and same with forward direction.
4. Keep your hand on your waist and roll your body and waist in clockwise direction and do the same in anti-clockwise direction.
5. Then take your right leg and roll your ankle in clockwise direction and repeat it to the left leg.

PHYSICAL ACTIVITY FOR 20 MINUTES

Step 1

1. Lift your hand, then touch them between yours legs and repeat it for 2 times with music.
2. Next, go back, jog, jump by keeping hands open and repeat it for 2 times.
3. Now touch your right toe with left hand and touch your left toe with right hand.
4. Now stand straight, take your left leg apart, lift your right leg up and down and do the same in the right side, take your right leg apart and lift your left leg up and down for 2 times.
5. Join your feet together, now hold your hand and bend downwards and then open your leg and close your hand together and bend downwards. Repeat it for 2 times.
6. Now do all the step 1 exercises faster with music.

Step 2

1. Now take a deep breath.
2. Stand straight, close your feet, jog slowly and then speed up the exercise and repeat it for 2 times.
3. Now imagine, you are having skipping rope in your hands and you are going to skip with the help of your hands which should swing.
4. Next, go four steps forward in left side, lift your right leg, then move backward and lift your right leg and do the same in right side.

5. Do the entire step fastly along with music.

Step 3

1. Take a deep breath.
2. Now take two steps sideways to the left side, then touch the ground and repeat the same to the right side. Do this for 2 times slowly and then do faster with music.
3. Next, with the help of ball, you should pass the ball with your partner and jog while you are passing.
4. Now, do the exercise of step 3 faster with music.

COOL DOWN EXERCISES FOR 5 MINUTES

1. Now sit on the floor, sit straight, open your hands, bend your palm downwards and then upward slowly and repeat it for 2 times
2. Then by sitting, open your hands bend halfway towards your body and turn towards left side and turn straight and then right and return back to straight.
3. In sitting position close your eyes, take a deep breath in and out for 20 seconds.

POST PROCEDURE CARE

1. Documentation of procedure.
2. Observe for any discomfort after the procedure.

3.9. HYPOTHESIS

H_1: There is a significant difference in the level of Self Esteem among school children before and after Aerobic Exercises.

H_2: There is a significant difference in the level of Self Esteem between school children at Mani Higher Secondary School and Government Higher Secondary School Coimbatore.

3.10. PILOT STUDY

The pilot study was conducted to check the feasibility, practicality, validity and reliability of the tool. The study was conducted at Mani Higher Secondary School, for VII standard children. Children of VII-A and VII-E sections were included as samples. The study was commenced on 10.6.2013 and was finished on 20.6.2013. Totally 20 samples selected for the study. The intervention was implemented to school children those who had low Self Esteem. The intervention was administered for 10 alternative days for 30 minutes. The intervention was executed as a group intervention. Each group consists of 10 students. After the intervention, the efficacy of the Aerobic Exercises was assessed by using Modified Rosenberg Self Esteem Scale.

3.11. MAIN STUDY

The study was conducted in Mani Higher Secondary School and Government Higher Secondary School, Coimbatore from 22.6.2013 to 22.7.2013. The data were collected for a period of 30 days. From the first day of data collection period, Modified Rosenberg Self Esteem Scale was administered to 399 school children of

both the schools. Out of them, 124 children were selected from both the schools with low Self Esteem, on the basis of Purposive Sampling Technique. Among 124 school children, 91 children of Mani Higher Secondary School were divided in to 7 groups, on the basis of their class sections and 33 children of the Government school were divided into 3 groups. The intervention was administered in separate groups from 9.00 am to 4.00 pm in both the schools. Aerobic Exercises were implemented to the school children with low Self Esteem, alternatively, in both the schools for 30 minutes, for 4 weeks. The intervention, which consists of 10 sessions, was carried out for both the school children. After the intervention the level of Self Esteem was re-assessed with the same Scale on the tenth session.

3.12. TECHNIQUES OF DATA ANALYSIS AND INTERPRETATION

The questionnaire method of data collection was carried out in the present study. Both descriptive and inferential statistical methods were adopted for data analysis. The data collected were tabulated and analyzed by using ‘t’ test to find out the effectiveness of Aerobic Exercises among school children using modified Rosenberg self esteem scale.

DATA ANALYSIS AND INTERPRETATION

The participants of the study were school children of VII and VIII standard with low Self Esteem. The level of Self Esteem was assessed using Modified Rosenberg Self Esteem scale. The study was conducted in Mani Higher secondary school, Coimbatore and Government Higher Secondary School, Sidhapudur, Coimbatore. The level of Self Esteem was assessed for 399 school children among whom 124 school children were found with low Self Esteem. All 124 school children who had low Self Esteem were selected for the study. Aerobic Exercise was adopted for them, to improve the level of Self Esteem.

The data collected were analyzed using descriptive and inferential statistics and presented in the form of tables and figures.

SECTION I

4.1. DEMOGRAPHIC DATA PRESENTATION

The demographic characteristics collected from 124 school children were presented in the form of tables.

Table.4.1

Distribution of Demographic Variables of Children with Low Self Esteem

(N=124)

Demographic data	No of participants	Percentage (%)
Age in years		
12-13	71	57
13-14	53	43
Gender		
Male	95	77
Female	29	23
Standard		
7^{th}	43	34
8^{th}	81	66
Academic performance		
Poor	28	23
Average	77	62
Good	9	7

Demographic data	No of participants	Percentage (%)
Subject of interest		
English	29	23
Tamil	26	21
Social	17	14
Maths	20	26
Science	32	19
Number of hours allotted for sports in a week		
One hour	88	71
Two hour	29	23
Three hour	7	6
Extracurricular activities		
Sports	90	73
Paintings	15	12
Dance and music	19	15
Types of family		
Nuclear	88	71
Joint	36	29
Birth order		
First child	63	51
Second child	54	44
Third child	7	6

Demographic data	No of participants	Percentage (%)
Siblings		
One	81	65
Two	38	31
Three	5	4
Education of father		
Illiterate	16	13
School education	101	81
Graduate	7	6
Education of mother		
Illiterate	23	18
School education	94	76
Graduate	7	6
Occupation of father		
Coolie	48	39
Private employee	65	52
Government employee	11	9
Occupation of mother		
Coolie	23	19
Private employee	36	29
Government employee	4	3
House wife	61	49

Table 4.1 shows the demographic data distribution of 124 school children with low Self Esteem. It was found that 57% of school children's age was between 12-13 yrs, 77% of the school children with low Self Esteem were found to be male children. The level of education indicates 66% to be in 8^{th} standard. Academic performance indicates that, 62% of school children were average student, 23% were poor in academic performance, and 7% were good at the performance. Their subjects of interest states that, 26% of them were interested in Science subject. About 73% of school children state sports to be their extracurricular activity for which they spend only one hour in a week. It was found that 71% of school children live in a nuclear type of family. The birth order indicates that, 51% of the school children were first child in the family. It was identified that, 65% of the children had one sibling each. The educational status of parents indicates that, 81% of fathers and 76% of mothers had basic school education. Majority of mothers (49%) were house wives and 52% of fathers were working in private concerns.

SECTION II

4.2. ASSESSMENT OF SELF ESTEEM AMONG SCHOOL CHILDREN

The level of Self Esteem among school children was assessed using Modified Rosenberg Self Esteem Scale. The tool was administered to 399 school children and the level of Self Esteem was categorized as low, moderate and high Self Esteem. The school children with low Self Esteem were selected for intervention.

Table 4.2

Assessment of School Children with Low Self Esteem

(N=399)

Level of Self Esteem	No. of Children	Percentage (%)
High Self Esteem(46-60)	90	22
Moderate Self Esteem(31-45)	185	47
Low Self Esteem(0-30)	124	31

The Table 4.2 shows the distribution of school children based on the level of Self Esteem. The total, 399 school children were assessed on the level of Self Esteem among which, 90 had high Self Esteem, 185 had moderate Self Esteem and 124 had low Self Esteem. In order to maintain homogeneity and to check the efficiency of Aerobic Exercises, children with low Self Esteem were selected for the study. Therefore the total numbers of samples obtained for the study were 124 school children.

Table 4.3

Assessment on the Level of Self Esteem among School Children with Low Self Esteem Before and After Aerobic Exercises

(N=124)

Level of Self Esteem	Before Intervention		After Intervention	
	No of children	Percentage (%)	No of children	Percentage (%)
Low Self Esteem	124	100	27	22
Moderate Self Esteem	0	0	93	75
High Self Esteem	0	0	4	3

The Table 4.3 shows the distribution on level of Self Esteem before and after Aerobic Exercises among school children with low Self Esteem. Among 124 school children with low Self Esteem, after intervention, 3% of the school children had high level of Self Esteem, 75% had moderate level of Self Esteem and 22% of school children remained in the same low level of Self Esteem category, but with an improved score level. This shows that the Aerobic Exercises improved the level of Self Esteem among the school children.

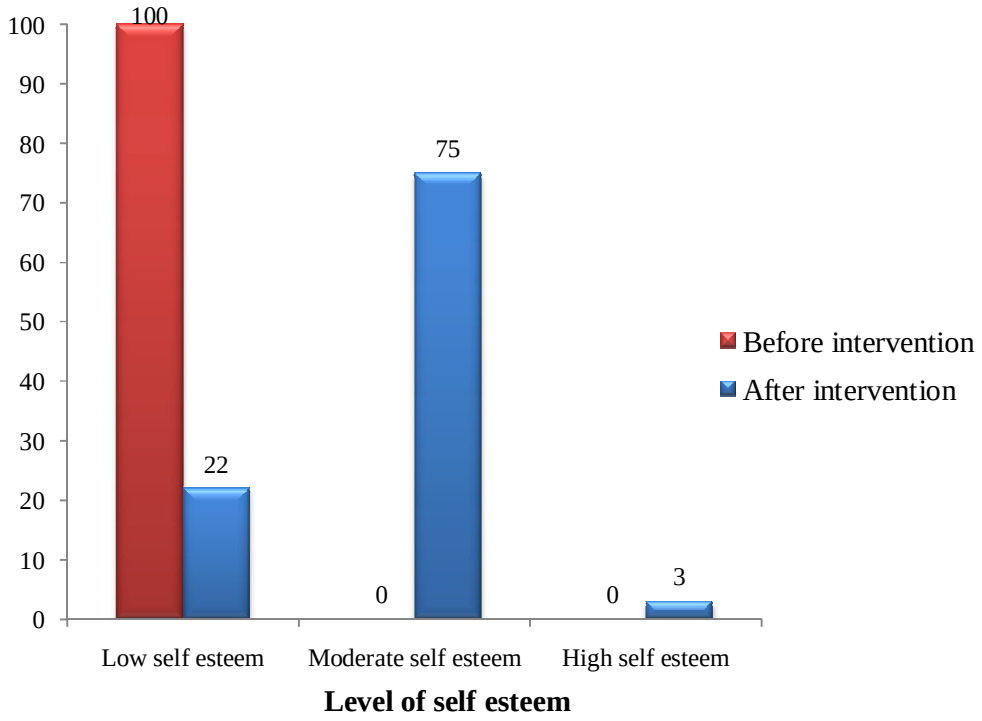


Fig 4.1

Comparison of level of Self Esteem before and after Aerobic Exercises among school children

SECTION III

4.3. ANALYSIS ON EFFECTIVENESS OF AEROBIC EXERCISES

Paired 't' test was used to find out the significance in effectiveness of Aerobic Exercises on Self Esteem among school children with low Self Esteem.

Table 4.4

Analysis on the Level of Self Esteem among School Children with Low Self Esteem

Before and After Aerobic exercises

(N=124)

	Mean	**SD**	**Mean (%)**	**Mean difference**	**'t'**
Before Intervention	26.70	2.75	45	7.59	13.25
After Intervention	34.29	9.53	55		

*** Significant at 0.05 level**

Table 4.4 shows that the Mean score of the Self Esteem among school children before and after Aerobic exercise was 26.70 and 34.29 with the Standard Deviation of 2.75 and 9.53 respectively. The calculated value 13.25 was found to be significant at 0.05 level. The calculated't' value is greater than the table value. Thus the alternative hypothesis **H_1: There is a significant difference in the level of Self Esteem among school children before and after Aerobic exercises,** is accepted. This shows that Aerobic Exercises is effective in improving the level of self esteem among school children.

4.3.1. ANALYSIS ON LEVEL OF SELF ESTEEM BETWEEN CHILDREN AT GOVERNMENT SCHOOL AND PRIVATE SCHOOL

The‘t’ test for independent samples is used to analyze the Mean level of Self Esteem between school children at Government school and Private school after Aerobic Exercises.

Table 4.5

Comparison on Mean Level of Self Esteem between Children at Government School and Private School

(N=124)

Group of Children	Mean	Mean%	SD	‘t’
Government school	33.48	55	5.013	1.65*
Private school	34.58	57	5.7097	

***Significant at 0.05 level**

Table 5.1 shows the calculated Mean and respected Standard Deviation of Self Esteem scores between children at Government School and Private School after intervention.

The Mean scores of the level of Self Esteem of Government School and Private School were 33.48 and 34.58 and their Standard Deviations were 5.013 and 5.709 respectively. The‘t’ test for independent samples is used to test the significance in Mean scores among the two group of children .The calculated ‘t’ value is found to be significant at 0.05 level. Thus, the alternative hypothesis **H_2: There is a significant difference in the level of Self Esteem between children of Mani Higher Secondary School and Government Higher Secondary School,** is accepted . Thus it proves that, there is a difference in the level of self esteem between children of Government school and Private school after Aerobic Exercises.

SECTION IV

4.4. ASSOCIATION BETWEEN ACADEMIC PERFORMANCE AND THE LEVEL OF SELF ESTEEM

Chi-square test is used to find out the influence of academic performance on the level of Self Esteem among school children.

Table 4.6

Academic Performance on the Level of Self Esteem

Demographic variable	χ^2
Academic performance	16.66

Table 4.6 shows the association of Self Esteem with the academic performance of the school children. It was found that χ^2 is 16.66, which is not significant at 0.05 level. Thus, the level of Self Esteem is not significantly associated with the academic performance of school children.

RESULTS AND DISCUSSION

This chapter deals with the interpretation of the results and discussion of the findings. The study was conducted in Mani Higher Secondary School, Coimbatore and Government Higher Secondary School, Siddapudhur, Coimbatore. The main aim of the study is to assess the effectiveness of Aerobic Exercises on Self Esteem among school children.

Quasi experimental one group pre-test and post-test design was adopted in this study. Modified Rosenberg Self Esteem Scale was administered to assess the Self Esteem of the school children. Purposive sample of 124 school children were selected for the study and the demographic variables were recorded. Aerobic Exercises were administered as an intervention to the school children for a period of four weeks. The Self Esteem of the school children was assessed after the intervention.

5.1. FINDINGS RELATED TO DEMOGRAPHIC DATA OF CHILDREN

5.1.1. AGE DISTRBUTION

In the present study, out of 124 school children, 57% of school children belong to 12 to 13 years of age group and 43% of school children belong to 13 to 14 years of age group. It reveals that the majority of the school children (57%) were between 12 to 13 years. A study on exercises to improve Self Esteem in school children and young people, by Eke land et al., (2009), reveals that, Aerobic Exercises was effective in terms of improving Self Esteem among school children.

5.1.2. GENDER DISTRIBUTION AND STANDARD OF SCHOOL CHILDREN

Among 124 samples, majority of the participants (77%) are males, and 23% of them were female. In a study on age and gender differences in the Self Esteem of Chinese children by Watkins D, Dong Q, Xia Y (1997), the analysis has shown that the older girls tended to report significantly lower Self Esteem, than both the younger girls and older boys in the area of physical abilities, reading, mathematics, and general self concept. The boys reported more positive self perception on most non-academic self scales, but both the older boys and older girls reported less favorable Self Esteem than their younger peers on the scale for reading and school in general.

With respect to their standard, 34% of school children are studying 7^{th} standard and 66% of school children are studying 8^{th} standard.

5.1.3. ACADEMIC PERFORMANCE AND SUBJECT OF INTEREST

With regard to Academic performance of the school children, 23% of the children have poor performance, 62% of the school children have average performance and 7% of the school children have good academic performance. A study was conducted to test the effect of Aerobic exercises on cognition, academic achievement, and psycho-social function in children (2013) by Caitlin Lees, M D, M A, Jessica Hopkins M D., They found that Aerobic exercises is positively associated with cognition, academic achievement, behavior and psycho-social functioning outcomes. But in the present study, it is not associated with academic performance of school children. Their subject of interest states that 26% of them were interested in Science subject.

5.1.4. HOURS ALLOTED FOR SPORTS AND EXTRA CURRICULAR ACTIVITIES

About 70% of school children state sports to be their extracurricular activity for which they spend only one hour.

5.1.5. TYPE OF FAMILLY, BIRTH ORDER AND SIBLINGS

With respect to types of family 71% of school children belong to nuclear family, 29% of school children belong to joint family. In the distribution of birth order 51% of them belongs to first child 44% of the school children were second child, 6% of the school children were third child in their family. In the distribution of siblings, 65% of them have one sibling, 31% of them have two siblings and 4% of them have three siblings.

5.1.6. EDUCATION AND OCCUPATION OF PARENTS

The educational status of parents indicates that, 81% of fathers and 76% of mothers had basic school education. Majority of mothers (49%) were house wives and 52% of fathers were working in private concerns. In a study on the effect of Aerobic Exercises on psychological well being in low income Hispanic children by Debra J Crews et.al, (2004), it was found that low income children were at higher risk of experiencing high environmental stress and increased mental health problems than the general population. But in the present study, education and occupation is not associated with Self Esteem among school children.

5.2. FINDINGS RELATED TO EFFECTIVENESS OF AEROBIC EXERCISES ON SELF ESTEEM

In a study on the effect of physical activity and exercises training on psychological stress and well being in an adolescent population by Norris R, Carroll D, Cochrane R (1992), it revealed that, adolescents with greater physical activity had less stress and lower levels of depression. Adolescents who experienced a higher incidence of life events also demonstrated a strong association between stress and depression. This experiment provides evidence to suggest that, in an adolescent population, high intensity Aerobic Exercises have positive effects on well being. This study is similar to the current study and Aerobic Exercises were implemented and its effectiveness on Self Esteem among school children aged 12 to 14 years, was assessed. Analysis reveals the Mean score of the Self Esteem among school children before and after Aerobic Exercises was 26.70 and 34.29 respectively, with the Standard Deviation of 2.75 and 9.53 respectively. The calculated‘t’ value of 13.78 was compared with the table value at 0.05 level of significance. The calculated‘t’ value is greater than the table value .Thus it accepts the alternative hypothesis and it shows that ,there is a difference in the level of Self Esteem among school children before and after Aerobic Exercises.

5.3. COMPARISON ON THE LEVEL OF SELF ESTEEM BETWEEN CHILDREN OF GOVERNMENT SCHOOL AND PRIVATE SCHOOL

In the study of assessing the personal and emotional developmental outcomes on high school students between 10 to18 years of age by Merger, A G and Spooner – Lane R (2012), in an attempt to determine whether high schools are indeed supporting

the personal and emotional development of young people, it reveals that, all participants demonstrated high levels of personal responsibility and emotional intelligence, with no significant differences between the public and private school. But public and private school participants significantly differed on Self Esteem with private school participants reporting high level of Self Esteem (M=30.36) and public school participants (M=26.92) reporting moderate level of Self Esteem.

In the present study, Mean scores of the level of Self Esteem of Government school and Private school, were 33.48 and 34.58 respectively and their Standard Deviations were 5.013 and 5.709 respectively. The‘t’ test for independent samples is used to test the significance in Mean scores among the two groups of children .The calculated‘t’ value is greater than the tabulated value at 0.05 level of significance. Hence, the hypothesis “**There is a significant differences in the level of Self Esteem in Mani Higher Secondary School and Government Higher Secondary School, Siddapudhur, Coimbatore”** is accepted. Thus it shows that, Aerobic Exercises have influences on improving Self Esteem of school children.

5.4. ASSOCIATION OF LEVEL OF SELF ESTEEM WITH ACADEMIC PERFORMANCE

In the present study, the level of Self Esteem was associated with the academic performance of the school children using ‘chi square’ test. It was found that the association between the academic performance and the level of Self Esteem is 16.16, which is lesser than the table value at 0.05 level of significance. Thus, the level of Self Esteem is not significantly associated with academic performance of school children.

SUMMARY AND CONCLUSION

This chapter deals with the findings, recommendation and implications in the field of nursing education, practice, administration and nursing research. The study was conducted to see the effectiveness of Aerobic Exercises on Self Esteem among school children of selected schools at Coimbatore.

Quasi experimental one group pre-test and post-test design was used for the study. General System Theory was used in application of Clinical Nursing Theory, which was proposed in the year of 1968 and it was used as a conceptual framework for the present study. The present study was conducted in Government Higher Secondary School and Mani Higher Secondary School at Coimbatore. Modified Rosenberg Self Esteem Scale was used in pre-test by using Purposive Sampling Technique. Among the total school children, 124 school children were identified with low Self Esteem and they were used for the intervention. Aerobic Exercises were administered for those children for a month and the post-test was administered using the same Scale. The data analysis was done using descriptive and inferential statistics.

6.1. MAJOR FINDINGS OF THE STUDY

1. Among 399 school children, 124 had low Self Esteem. Out of them, 27 % of the children are from Government Higher Secondary School and 73% are from Mani Higher Secondary School.
2. The Mean percentage of the school children’s self esteem progress from 45% to 55%.

3. The Mean percentage of the children in Government school and Private school is 55% and 57% respectively.
4. There is no association between level of Self Esteem and Academic performance.

6.2. LIMITATION

1. Within the study period, it was difficult to check the academic performance of the school children.

6.3. NURSING IMPLICATION

6.3.1. NURSING EDUCATION

Aerobic Exercises is a technique used in the present study, as it is proved that it can improve the academic performance and it helps in improving Self Esteem. Nurses need to have knowledge and awareness on Aerobic Exercises, as it is an effective measure to overcome low Self Esteem. Hence, necessary steps should be taken to incorporate Aerobic Exercise into nursing curriculum.

6.3.2. NURSING ADMINISTRATION

As a Nursing Administrator, she has a responsibility to provide comprehensive classes in Aerobic exercises for nursing students. The Nursing Administrator can organize a relaxation program in school health campaigns, as a Community Nurse in school health services, to educate the children about the Aerobic Exercises.

6.3.3. NURSING PRACTICE

Aerobic Exercises are an effective measure to improve Self Esteem of school children. It is helpful in identifying one's own strength and weakness. One of the extended roles of a Nurse is school health nurse, whose responsibility is to incorporate Aerobic Exercises practice in school curriculum. School Health Nurse must be talented to identify children with low Self Esteem and to help them through Aerobic Exercises to the school children. Teachers can be trained in providing Aerobic Exercises to the school children.

6.3.4. NURSING RESEARCH

The study has tested the effectiveness of Aerobic Exercises on Self Esteem among school children. It can be used as evidence based practice for improving Self Esteem. Similar studies can be undertaken for assessing the Self Esteem among adolescent girls. The incidence and prevalence of problems associated with low Self Esteem could be studied.

6.4. RECOMMENDATIONS

1. School children belonging to 10th and 12th standards can be trained in improving Self Esteem which helps to relieve them from stress.
2. Aerobic Exercises can be implemented for thrice a week along with physical education training class, among school children.
3. Aerobic Exercises classes can be implemented for adolescent girls in school.

4. A comparative study can be conducted to assess the effectiveness of Aerobic Exercises on Self Esteem among boys and girls in the age group of 12 to 14 years.
5. A long term study can be conducted to assess the Self Esteem among school children with their academic performance.
6. A study can be conducted to assess the effect of Aerobic Exercises on Self Esteem among adolescent girls.

6.5. CONCLUSION

The study was conducted to find the effectiveness of Aerobic Exercises on Self Esteem among school children. The Mean percentage of level of Self Esteem has been increased from 45% to 55 %. This proves that the Aerobic Exercises is effective in increasing in Self Esteem among school children. Hence, the researcher concludes that this intervention is an appropriate method to improve Self Esteem among school children to achieve a healthy well being.

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ANNEXURE - I

Dependent 't' test

To test the hypothesis, 't' test was applied to find out the significant difference in the level of self-esteem before and after administration of Aerobic exercises

$$t = \frac{\bar{d}}{\frac{SD}{\sqrt{n}}}$$

$$SD = \sqrt{\frac{\sum \left(d - \bar{d}\right)^2}{n}}$$

Where,

$\bar{d}$ = Mean of difference

SD = Standard deviation

n = Number of samples

ANNEXURE – II

Independent 't' test

To test the hypothesis, 't' test was applied to find out the significant difference in the level of self-esteem between Government school children and Private school children.

$$t = \frac{\overline{x_1} - \overline{x_2}}{s}\sqrt{\frac{n_1 n_2}{n_1 + n_2}}$$

$$SD = \sqrt{\frac{\sum \left(x_1 - \overline{x_1}\right)^2 \left(x_2 - \overline{x_2}\right)^2}{n_1 + n_2}}$$

Where,

$\overline{X}_1$ = Mean of the Government school children post test

$\overline{X}_2$ = Mean of the Private school children post test

n_1 = Number of samples in Government school

n_2 = Number of samples in Private school

ANNEXURE – III

Chi-square test

Chi-square test was used to find out the influence of selected demographic variables on self-esteem.

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

Where,

χ2 - Chi Square

O - Observed sample in each category.

E - Expected frequency in corresponding category.

APPENDIX I

PERMISSION LETTER FOR CONDUCTING THE STUDY

Proceedings of the Corporation Educational Officer, Coimbatore
Present: Tmt..H.Vasantha .M.Sc.,M.Ed.,M.Phil.,

ROC NO.3731/2013/K-9 **Dated . 10 .05.2013**

Sub : Education – Coimbatore Corporation – Selvi. M.Pradeepa doing M.Sc Nursing – conduct the study in Corporation Higher Secondary Schools – Permission granting of - Regarding.

Ref: 1. Letter of Selvi. M.Pradeepa, Student of Sri Ramakrishna Institute of paramedical sciences, Dated.22.04.2013.

2. Orders of the commissioner Dated. 04.05.2013.

Permission is hereby accorded to Selvi. M.Pradeepa, M.Sc Nursing Ist year Student of Sri Ramakrishna Institute of paramedical sciences, to conduct the study on "Effect of Aerobic Exercise on self esteem among school children" in Corporation Siddhapudur Higher Secondary School among 7th Standard and 8th Standard student from 03.06.2013 to 22.07.2013 on the following conditions.

Conditions:

1. Normal functioning of the school should not be disturbed.
2. Prior permission of the Headmaster of the concerned school should be obtained.
3. Students should not be compelled to participate in the programme.
4. No clinical experiments should be conducted with the students.

Corporation Educational Officer,
Coimbatore Corporation.

To

Selvi. M.Pradeepa,
M.Sc Nursing
Sri Ramakrishna Institute of paramedical science
Coimbatore-44.

Copy :- To the concerned School Headmaster.

From

M.Pradeepa,

MSc [Nursing] 1st year,

College of Nursing,

Sri Ramakrishna Institute of Paramedical Sciences,

Coimbatore 44.

To

THE PRINCIPAL,

MANI HIGHER SECONDARY SCHOOL

COIMBATORE

Through

The Principal,

College of Nursing,

Sri Ramakrishna Institute of Paramedical Sciences,

Coimbatore 44.

Subject:-Requesting permission to conduct the study in your esteemed institution Reg

Respected sir\madam,

As my part of my MSc [Nursing] programme , I wish to conduct the study on **''EFFECT OF AEROBIC EXERCISE ON SELF ESTEEM AMONG SCHOOL CHILDREN AT SELECTED SCHOOLS ,COIMBATORE**"I would like you to give permission to conduct the study in your institution I would be kind enough in obeying your institution rules and regulation. I kindly request you to do the needful.

Thanking you,

Yours obediently,

M.Pradeepa

PRINCIPAL
College of Nursing,
Sri Ramakrishna Institute of Paramedical Sciences
Coimbatore - 641 044.

Accepted.
Pl. meet me
on June 5th

APPENDIX II

REQUISITION LETTER TO VALIDATE THE RESEARCH TOOL AND CONTENT

From,

M.Pradeepa,
M.Sc (Nursing) I year,
College Of Nursing, SRIPMS,
Coimbatore.

To,

Dr. A.K. Jaleel Ahamed. BSc, MD, DCH
cheif pediatrician and Neonatologist
Sri Ramakrishna hospital.

Through,

The Principal,
College Of Nursing,SRIPMS,
Coimbatore.

Respected Sir/Madam,

Subject: Requisition for tool and content validation:-Reg

I am M.Pradeepa doing my 1st year M.Sc Nursing in Sri Ramakrishna Institute of Paramedical Sciences and as a part of my M.Sc Nursing Program, I have undertaken the following study for my research "**Effect Of Aerobic Exercise On Self Esteem Among School Children At Selected Schools , Coimbatore**". The following tool is tend to be used, hence I request you to kindly give me a valuable suggestion and necessary modification for the same.

Thanking you,

Coimbatore.

for PRINCIPAL
College of Nursing,
Sri Ramakrishna Institute of Paramedical Sciences
Coimbatore - 641 044

Yours Sincerely,

M.Pd

(M. PRADEEPA)

CONTENT VALIDITY FORMAT

Name of the Expert: Dr. A.K. Jaleel Ahamed, Bsc, MB, DCH

Address: chief pediatrician and Neonatologist
Sri Ramakrishna hospital
coimbatore.

Kindly validate each section in the tool and mark wherever applicable.

S.NO	SECTIONS OF THE TOOL	STRONGLY AGREE	AGREE	NEED NOTIFICATION	REMARKS
1.	SECTION-A	✓			
2.	SECTION-B		✓		
3.	SECTION-C	✓			

Total content of the tool: Adequate/Inadequate

Date: 14 MAY 2013

Signature of the Expert

A.K. Jaleel Ahamed, M.B., D.C.H.
Chief Pediatrician and Neonatologist,
Regd. No: 35715,

REQUISITION LETTER TO VALIDATE THE RESEARCH TOOL AND CONTENT

From,

M.Pradeepa,

M.Sc (Nursing) I year,

College Of Nursing, SRIPMS,

Coimbatore.

To,

Prof. Malarvizhi.
HOD. Pediatric Nursing Department
PSG college of Nursing
Coimbatore

Through,

The Principal,

College Of Nursing,SRIPMS,

Coimbatore.

Respected Sir/Madam,

Subject: Requisition for tool and content validation:-Reg

I am M.Pradeepa doing my 1st year M.Sc Nursing in Sri Ramakrishna Institute of Paramedical Sciences and as a part of my M.Sc Nursing Program, I have undertaken the following study for my research "**Effect Of Aerobic Exercise On Self Esteem Among School Children At Selected Schools , Coimbatore**". The following tool is tend to be used, hence I request you to kindly give me a valuable suggestion and necessary modification for the same.

Thanking you,

Coimbatore.

PRINCIPAL
College of Nursing,
Sri Ramakrishna Institute of Paramedical Sciences
COIMBATORE - 641 044

Yours Sincerely,

M. Pradeepa

(M. PRADEEPA)

CONTENT VALIDITY FORMAT

Name of the Expert: Prof. Malarvizhi

Address: HOD, Pediatric Nursing department
PSG college of Nursing
coimbatore

Kindly validate each section in the tool and mark wherever applicable.

S.NO	SECTIONS OF THE TOOL	STRONGLY AGREE	AGREE	NEED NOTIFICATION	REMARKS
1.	SECTION-A			✓	Add Academic & extracurricular activities
2.	SECTION-B			✓	Evaluate Academic performance pre & post
3.	SECTION-C		✓		

Total content of the tool: Adequate/Inadequate ✓

Date: 4.6.'13

PSG COLLEGE OF NURSING ★ Peelamedu ★ COIMBATORE-4

Signature of the Expert

REQUISITION LETTER TO VALIDATE THE RESEARCH TOOL AND CONTENT

From

Ms. Pradeepa

M.Sc (Nursing) I year,

College Of Nursing, SRIPMS,

Coimbatore.

To

prof. Emerentia
pediatric Nursing department
RVS college of Nursing
salur

Through

The Principal,

College Of Nursing, SRIPMS,

Coimbatore.

Respected Sir/Madam,

Subject: Requesting permission to conduct study

I am M. Pradeepa doing my 1st year M.Sc Nursing in Sri Ramakrishna Institute of Paramedical Sciences and as a part of my M.Sc Nursing Program. I have undertaken the following study for my research "**Effect of Aerobic Exercise on Self Esteem among School Children at Selected Schools , Coimbatore**". The following tool is tend to be used, hence I request you to kindly give me a valuable suggestion and necessary modification for the same.

Thanking you.

R. Ramalekha

Coimbatore,

PRINCIPAL
College of Nursing

yours sincerely,

(M . PRADEEPA)

CONTENT VALIDITY FORMAT

Name of the Expert: Emerentia.

Address: 2/42B. TRICITY ROAD
RVS - COLLEGE OF NURSING
SULUR.

Kindly validate each section in the tool and mark wherever applicable.

S.NO	SECTIONS OF THE TOOL	STRONGLY AGREE	AGREE	NEED NOTIFICATION	REMARKS
1.	SECTION-A		✓		
2.	SECTION-B		✓		
3.	SECTION-C		✓		

Total content of the tool: Adequate/Inadequate ✓

Date:

6/6/2013
Signature of the Expert

R.V.S. COLLEGE OF NURSING
SULUR, CBE-641 402

REQUISITION LETTER TO VALIDATE THE RESEARCH TOOL AND CONTENT

From,

M.Pradeepa

M.Sc (Nursing) I year,

College Of Nursing, SRIPMS,

Coimbatore.

To,

Prof. Shanthi.,
HOD, Pediatric Nursing department
GKNM
coimbatore

Through,

The Principal,

College Of Nursing,SRIPMS,

Coimbatore.

Respected Sir/Madam,

Subject: Requisition for tool and content validation:-Reg

I am M.Pradeepa doing my 1st year M.Sc Nursing in Sri Ramakrishna Institute of Paramedical Sciences and as a part of my M.Sc Nursing Program, I have undertaken the following study for my research "**Effect Of Aerobic Exercise On Self Esteem Among School Children At Selected Schools , Coimbatore**". The following tool is tend to be used, hence I request you to kindly give me a valuable suggestion and necessary modification for the same.

Thanking you,

Coimbatore.

for PRINCIPAL
College of Nursing,
Sri Ramakrishna Institute of Paramedical Sciences
Coimbatore - 641 044.

Yours Sincerely,

M. Pradeepa.

(M. PRADEEPA)

CONTENT VALIDITY FORMAT

Name of the Expert: P. SHANTHI

Address: VICE PRINCIPAL
INSTITUTE OF NURSING
G.K.N.M. HOSPITAL

Kindly validate each section in the tool and mark wherever applicable.

S.NO	SECTIONS OF THE TOOL	STRONGLY AGREE	AGREE	NEED NOTIFICATION	REMARKS
1.	SECTION-A			✓	Need. options.
2.	SECTION-B			✓	Repeated Questions. need to check
3.	SECTION-C		✓	✓	Appl.

Total content of the tool: Adequate/Inadequate

Date: 13/5/13

P. Shanthi
Signature of the Expert

SHANTHI P.
VICE PRINCIPAL
INSTITUTE OF NURSING
G.K.N.M. HOSPITAL
COIMBATORE - 641 037.

APPENDIX III

SECTION–A

DEMOGRAPHIC PROFILE

Sample number

1.	Age	:	12 - 13/ 13-14
2.	Gender	:	Male/Female
3.	Standard	:	7 th / 8 th
4.	Academic performance	:	Poor/Average/ Good
5.	Subject of Interest	:	English/Tamil/Social/Maths/Science
6.	Numbers of hours allotted for sports in a week	:	1 hr/ 2hr/3hr
7.	Extracurricular activities	:	Sports / paintings/ dance/ music
8.	Types of family	:	Nuclear/ Joint
9.	Birth order	:	First child / Second child / Third child
10.	Siblings	:	one / two / three/ four/ five
11.	Education of father	:	Illiterate/ School education / Graduate
12.	Education of mother	:	Illiterate/ School education / Graduate
13.	Occupation of the father	:	Coolie /Private employee/Govt employee
14.	Occupation of the mother	:	Coolie /Private employee/Govt Employee/House wife

SECTION B

MODIFIED ROSENBERG SCALE FOR SELF ESTEEM

The Rosenberg self-esteem scales (RSES), developed by sociologist Dr. Morris Rosenberg, is a self-esteem measure widely used in social-science research.

The RSES is designed similar to social-survey questionnaires. It is a ten-item Likert-type scale with items answered on a four-point scale — from strongly agrees to strongly disagree. The modified Rosenberg self esteem scale contains four sub groups and each sub group contains five items

Personal self esteem

S.No	Statement	SD	DA	A	SA
1	I am a truthful person				
2	I always obey my parents				
3	I will not show angry towards others				
4	I will do my daily activities without depending on others				
5	I can adjust when teachers scolds me				

Social self esteem

S.No	Statement	SD	DA	A	SA
6	I am a friendly person				
7	I plays sports with peer group				
8	My friends are always support me				
9	I prefers to be with my friends				
10	I prefers to participate in school activities				

.

School self esteem

S.No	Statement	SD	DA	A	SA
11	I do my school work daily				
12	I follow the instructions given by my teacher				
13	I like to go to school daily				
14	I always respect my teachers				
15	I often maintain cleanliness of my class with my friends				

Self confidence

S.No	Statement	SD	DA	A	SA
16	I am able to answer the question asked by my teacher				
17	I am able to participate in individual competition				
18	I confident about my own ability				
19	I am able to do my mathematics homework daily				
20	I have good self-control				

SCORING

The response is measured in four point scale from strongly agree to strongly disagree to strongly agree. The scoring is

Strongly disagree - 0

Disagree - 1

Agree - 2

Strongly agree - 3

INTERPRETATION

High self esteem	:	45-60 [more than 75%]
Moderate self esteem	:	31-45 [50% to 75%]
Low self esteem	:	0 – 30 [less than or equal to 50%]

SECTION C

PROCEDURE OF AEROBIC EXERCISES

Aerobic exercises is a physical exercise of relatively low intensity that depends primarily on the aerobic generating process. Aerobic literally means living in air and refers to the use of oxygen, to adequately meet energy demands during exercise via aerobic metabolism. It was developed by Dr Kenneth C. Cooper in the year of 1966. Making exercise fun is the great way to encourage the children to get active and energetic. In the present study the researcher instructed the children to follow the steps of exercises.

STEPS

PREPARATION

- Prepare the children for Aerobic exercises.
- Provide safe and motivating environment for Aerobic exercises.
- Ensure that all the activities and facilities which enable every student to participate.

"Exercises with Music"

WARM UP EXERCISES FOR 5 MINUTES

Neck Exercises

1. Take a deep breath.
2. First stand with leg with distance apart and your hands on your wrist.

3. Now roll your neck slowly from left to right and then right to left, then repeat it for 2 times.
4. Next, move your neck slowly from left and then right and look up and down and repeat it for 2 times.

Shoulder Exercises

1. Stand straight, move your right hand towards back, lock your elbow tightly and start roll your hand backwards and do the same with your left hand.
2. And move your right hand forward and then do the same in the left hand slowly.
3. Next, move both the hands backward and same with forward direction.
4. Keep your hand on your waist and roll your body and waist in clockwise direction and do the same in anti-clockwise direction.
5. Then take your right leg and roll your ankle in clockwise direction and repeat it to the left leg.

PHYSICAL ACTIVITY FOR 20 MINUTES

Step 1

1. Lift your hand, then touch them between yours legs and repeat it for 2 times with music.
2. Next, go back, jog, jump by keeping hands open and repeat it for 2 times.

3. Now touch your right toe with left hand and touch your left toe with right hand.
4. Now stand straight, take your left leg apart, lift your right leg up and down and do the same in the right side, take your right leg apart and lift your left leg up and down for 2 times.
5. Join your feet together, now hold your hand and bend downwards and then open your leg and close your hand together and bend downwards. Repeat it for 2 times.
6. Now do all the step 1 exercises faster with music.

Step 2

1. Now take a deep breath.
2. Stand straight, close your feet, jog slowly and then speed up the exercise and repeat it for 2 times.
3. Now imagine, you are having skipping rope in your hands and you are going to skip with the help of your hands which should swing.
4. Next, go four steps forward in left side, lift your right leg, then move backward and lift your right leg and do the same in right side.
5. Do the entire step fastly along with music.

Step 3

1. Take a deep breath.
2. Now take two steps sideways to the left side, then touch the ground and repeat the same to the right side. Do this for 2 times slowly and then do faster with music.

3. Next, with the help of ball, you should pass the ball with your partner and jog while you are passing.
4. Now, do the exercise of step 3 faster with music.

COOL DOWN EXERCISE FOR 5 MINUTES

1. Now sit on the floor, sit straight, open your hands, bend your palm downwards and then upward slowly and repeat it for 2 times
2. Then by sitting, open your hands, bend halfway towards your body and turn towards left side and turn straight and then right and return back to straight.
3. In sitting position close your eyes, take a deep breath in and out for 20 seconds.

POST PROCEDURE CARE

1. Documentation of procedure.
2. Observe for any discomfort after the procedure.

APPENDIX IV

CERTIFICATE OF ENGLISH EDITING

TO WHOMEVER IT MAY CONCERN

This is to certify that the dissertation " EFFECT OF AEROBIC EXERCISE ON SELF ESTEEM AMONG SCHOOL CHILDREN AT SELECTED SCHOOLS, COIMBATORE" done by M.Pradeepa, II year M.Sc Nursing ,college of nursing ,Sri Ramakrishna Institute of Para medical Sciences, Coimbatore has been edited for English language appropriateness.

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